

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

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REMARKS

In this Amendment, claims 1 and 52 are amended merely to recite the subject matter without any intention of narrowing the scope of any of the claims. No new matter has been added. Claims 1-4, 6-54 and 56-67 are pending in this patent application. Reconsideration of the rejection in view of the remarks below is requested.

Applicant acknowledges that there is no claim 55 in this application through error at the initial filing. Applicant trusts the Office will renumber the claims appropriately to resolve that issue.

Rejection under 35 U.S.C. §101

The Office Action of December 28, 2005 (hereinafter the "Office Action") rejected claims 52-63, 66 and 67 under 35 U.S.C. §101. Specifically, the Office Action states that the claims are allegedly not enabled in the technological arts nor limited to a machine. Applicant traverses.

Applicant assumes that the rejection of claims 66 and 67 under 35 U.S.C. §101 is incorrect as the Office Action indicates that the rejection of claim 16 under 35 U.S.C. §101 - from which claims 66 and 67 depend - has been overcome. If this assumption is incorrect, Applicant requests a further non-final Office Action with appropriate and pertinent reasoning for the rejection of those claims.

Merely to expedite prosecution and without any intention of narrowing the scope of the claims, claim 52 now recites a database system embodied in a tangible medium. Claim 52 is at least patentable as a new and useful machine or manufacture as provided in 35 U.S.C. §101, more specifically a database system embodied in a tangible medium representing an organization involving directories representing entities, their characteristics, roles, and relationships together with their associations with cryptographic capabilities, the database system comprising the recited transactional components. Claims 53-54 and 56-63 depend from claim 52 and are therefore patentable subject matter at least for the reasons set forth above with respect to claim 52, and for the features they individually recite.

Accordingly, for at least the above reasons, the rejection of the claims under 35 U.S.C. §101 is traversed and claims 52-63, 66 and 67 are believed to be allowable.

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Rejection under 35 U.S.C. §102(e) in view of Ginter et al.

The Office Action rejected claims 1-15, 64 and 65 under 35 U.S.C. §102(e) as allegedly being unpatentable over U.S. Patent No. 5,892,900 to Ginter et al. ("Ginter et al."). Applicant respectfully traverses the rejection because the cited portions of Ginter et al. fail to disclose, teach or suggest all the features recited in combination in the rejected claims.

As noted in Applicant's specification, cryptographic representation of an organization has typically been defined statically, for a given time. But, such representation has limits especially in organizations facing structural or dynamic changes. Thus, Applicant's invention of claim 1 relates to control and maintenance of an operational organizational structure to solve, for example, management of dynamic organizations which often can face significant structural changes. To facilitate this control and maintenance, Applicant's method of claim 1 associates entities with cryptographic capabilities and organizes the entities within the organizational structure as roles. The claimed method further maintains (i.e., changes, updates, etc.) the roles within the organizational structure.

Ginter et al. is generally directed to completely different subject matter, namely systems and methods for electronic commerce including secure transaction management and electronic rights protection.

For example, Applicant submits that the cited portions of Ginter et al. fail to disclose, teach or suggest "organizing entities within the organizational structure as roles through associating the electronic representations of entities with electronic representations of roles", entities which have associated cryptographic capabilities, as recited in claim 1. The references to "role" in the cited portions of Ginter et al. are simply inapposite to the claim language since the claim recites more than the word "roles". For example, none of the cited portions of Ginter et al. references an organizational structure or organizing entities within that organizational structure by associating the electronic representations of entities with electronic representations of roles. Rather, the cited portions of Ginter et al. merely indicate that participants in the electronic commerce system of Ginter et al. may adopt different roles but provide no disclosure, teaching or suggestion of organizing entities, which have associated cryptographic capabilities, within an organization structure, let alone organizing those entities as roles by associating corresponding electronic representations as recited in claim 1.

Additionally, the cited portions of Ginter et al. fail to disclose, teach or suggest "upon any addition, deletion or modification of an entity, a cryptographic capability, or any of their

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associations, maintaining roles within the organizational structure by adding, deleting or modifying electronic representations of the entities, cryptographic capabilities, roles, or any of their associations" as recited in claim 1.

The cited portions of Ginter et al. merely disclose being able to "add, delete, and/or otherwise modify the specification of load modules and methods, as well as add, delete or otherwise modify related information." Similarly, the cited portions of Ginter et al. merely disclose "[h]andlers in a pathway of handling of content control information ... can establish, modify, and/or contribute to, permission, auditing, payment, and reporting control information related to controlling, analyzing, paying for, and/or reporting usage of, electronic content and/or appliances (for example, as related to usage of VDE controlled property content)."

However, none of the cited portions of Ginter et al. discuss maintaining roles within an organizational structure by adding, deleting or modifying electronic representations of the entities, cryptographic capabilities, roles, or any of their associations, let alone to do so upon any addition, deletion or modification of an entity, a cryptographic capability, or any of their associations. There is simply no reference in those cited portions of Ginter et al. to entities of an organizational structure, cryptographic capabilities of entities, roles of entities, or any of their associations as recited in and in the context of claim 1. The cited portions of Ginter et al. merely refer to adding, deleting or modifying completely dissimilar and unrelated items to the claimed items, such as load modules, content control information, etc.

Therefore, Applicant respectfully submits that the cited portions of Ginter et al. fail to at least disclose, teach or suggest a method for control and maintenance of an operational organizational structure, comprising, *inter alia*, "associating electronic representations of entities with cryptographic capabilities", "organizing entities within the organizational structure as roles through associating the electronic representations of entities with electronic representations of roles", and "upon any addition, deletion or modification of an entity, a cryptographic capability, or any of their associations, maintaining roles within the organizational structure by adding, deleting or modifying electronic representations of the entities, cryptographic capabilities, roles, or any of their associations" as recited in claim 1.

Claim 5 was previously cancelled and so its rejection is moot. Claims 2-4, 6-15, 64 and 65 depend from claim 1 and are therefore patentable subject matter at least for the reasons set forth above with respect to claim 1, and for the features they recite individually.

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Accordingly, for at least the above reasons, the rejection of claims 1-15, 64 and 65 under 35 U.S.C. §102 in view of Ginter et al. is traversed and claims 1-15, 64 and 65 are believed to be allowable.

Rejection under 35 U.S.C. §102 in view of Lampson et al.

The Office Action rejected claims 52-63 under 35 U.S.C. §102 as being unpatentable over Lampson et al., "Authentication in Distributed Systems: Theory and Practice", ACM Transactions on Computer Systems, Vol. 10, No. 4, Nov. 1992, pgs. 265-310. Applicant respectfully traverses the rejection because the teachings of Lampson et al. fail to disclose, teach or suggest all the features recited in combination in the rejected claims.

The Office Action has not specifically addressed the arguments made in Applicant's Amendment filed March 29, 2004, Response filed September 17, 2004, Submission dated December 17, 2004 and Amendment filed September 9, 2005. Thus, the Office Action continues to fail to identify specific reasons why claim 52 and its dependents are unpatentable in view of Lampson et al., why Applicant's previous arguments are not persuasive, and why these claims are not allowable in view of those arguments and Lampson et al. Accordingly, Applicant respectfully submits that claim 52 has not been considered as a whole and thus a prima facie case of unpatentability has not been established. Repetition in verbatim form of the rejection of claim 52 made in the first Office Action mailed October 28, 2003 is simply not sufficient or appropriate.

Nevertheless, Applicant submits once again that the cited portions of Lampson et al. fail to at least disclose, teach or suggest a database system embodied in a tangible medium representing an organization involving directories representing entities, their characteristics, roles, and relationships together with their associations with cryptographic capabilities, the system comprising "a maintenance system by which said database and said cryptographic authorities are maintained in coordination and by authorized parties assuring the representation of said organization and said cryptographic capabilities are soundly associated as defined by the coordination directives" and "maintenance transactions acting within said maintenance system, maintaining a view representing an organization" as recited in claim 52.

Lampson et al. merely disclose a theory of authentication and a system that implements it. The theory is based on the notion of principal and "speaks for" relation between principals. The theory shows how to reason about a principal's authority by deducing the other principals that it can speak for. In particular, they describe a system that

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passes principals efficiently as arguments or results of remote procedure calls, and handles public and shared key encryption, name lookup in a large name space, groups of principals, program loading, delegation, access control and revocation. Lampson et al., abstract. The cited portions of Lampson et al. fail to at least disclose, teach or suggest a database system embodied in a tangible medium representing an organization involving directories representing entities, their characteristics, roles, and relationships together with their associations with cryptographic capabilities as recited in claim 52. Rather, Lampson et al. is directed to a security system, particularly an authentication system.

In an embodiment, the system of Lampson et al. may make use of a certification authority as is well known. With respect to such a certification authority, Lampson et al. disclose the traditional methods of key and certificate management (including issuance, revocation, etc.). *See, e.g.*, Lampson et al., pgs. 283-285. For secure communication, the Lampson et al. system simply relies on, for example, checking the integrity (e.g., expiry) of the certificates themselves or checking certificate revocation lists but does not address, for example, the basic issue of the proper association of an entity to a cryptographic capability. Thus, Applicant submits that the cited portions of Lampson et al., particularly at pg. 270, do not disclose, teach or suggest a maintenance system by which the database, representing entities of an organization and their characteristics, roles and relationships, and the cryptographic capabilities are maintained in coordination and by authorized parties assuring the representation of the organization and such that the cryptographic capabilities are soundly associated as recited in claim 52.

Further, the cited portions of Lampson et al. do not disclose, teach or suggest "maintenance transactions acting within said maintenance system, maintaining a view representing an organization" as recited in claim 52. As discussed above, the cited portions of Lampson et al. do not disclose any sort of maintenance system. Moreover, the cited portions of Lampson et al. do not disclose maintaining any sort of view representing an organization. Page 270 of Lampson et al. merely discloses gathering of information and using algorithms to check whether to grant access. Applicant submits that there is just no indication that the gathering and checking corresponds to maintaining a view representing an organization.

Claims 53-54 and 56-63 depend from claim 52 and are therefore patentable subject matter at least for the reasons set forth above with respect to claim 52, and for the features they individually recite.

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Therefore, for at least the above reasons, the cited portions of Lampson et al. fail to disclose, suggest or teach all the features of claims 52-63, which claims are thus at least patentable under 35 U.S.C. §102.

Rejection under 35 U.S.C. §103(a)

The Office Action rejected claims 16-51 and 66-67 under 35 U.S.C. §103(a) as being obvious over Lampson et al. in view of Ginter et al. Applicant respectfully traverses the rejection because the cited portions of Lampson et al., Ginter et al, or any proper combination thereof, fail to disclose, teach or suggest all the features recited in combination in the rejected claims.

For example, the cited portions of Lampson et al. fail to at least disclose, teach or suggest a system for control and maintenance of an operational structure comprising, *inter alia*, code to “maintain electronic representations of capabilities of entities”, “maintain electronic representations of functions of entities”, “maintain electronic representations of characteristics of entities”, “maintain electronic representations of relationships of entities” and “change the maintained electronic representations of said entities said characteristics and said relationships upon an addition, deletion, or modification of a characteristic or relationship of the entities” as recited in claim 16.

Applicant submits that the cited portions of Lampson et al. provide no disclosure regarding any software configured to “maintain electronic representations of capabilities of entities”, such as a role in an organization (*see, e.g.*, claim 19), “maintain electronic representations of functions of entities”, such as an operation by a functionary in an organization (*see, e.g.*, claim 22), “maintain electronic representations of characteristics of entities”, such as an entity’s size, threshold for a quorum, or visibility (*see, e.g.*, page 21 of the specification) or “maintain electronic representations of relationships of entities”. While the authentication system of Lampson et al. may be applied to an organization, Applicant submits there is no disclosure, suggestion, or teaching in the cited portions of Lampson et al. how their system or its operation can or does maintain capabilities, functions, characteristics and relationships of entities within organizations as recited in claim 16. Rather, the Lampson et al. system and its operation merely facilitates secure communication.

Further, as admitted in the Office Action, the cited portions of Lampson et al. fail to provide any disclosure, teaching or suggestion regarding any software configured to “change the maintained electronic representations of said entities said characteristics and said

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relationships upon an addition, deletion, or modification of a characteristic or relationship of the entities” as recited in claim 16.

Further, assuming *arguendo* that Ginter et al. and Lampson et al. are properly combinable (which Applicant does not agree they are since, for example, they pertain to significantly different fields of endeavor – Ginter et al. relates to an electronic commerce transaction system and Lampson et al. relates to authentication in a distributed system - to which a person skilled in the art having regard to Applicant’s field would not be commended), the cited portions of Ginter et al. fail to overcome the deficiencies of the cited portions of Lampson et al.

For example, Applicant submits that the cited portions of Ginter et al. provide no disclosure regarding any software configured to “maintain electronic representations of capabilities of entities”, such as a role in an organization (*see, e.g.*, claim 19), “maintain electronic representations of functions of entities”, such as an operation by a functionary in an organization (*see, e.g.*, claim 22), “maintain electronic representations of characteristics of entities”, such as an entity’s size, threshold for a quorum, or visibility (*see, e.g.*, page 21 of the specification) or “maintain electronic representations of relationships of entities”. There is simply no disclosure, suggestion, or teaching by the cited portions of Ginter et al. of their system or its operation being able to maintain capabilities, functions, characteristics and relationships of entities within organizations as recited in claim 16. Such items are simply not referenced in the cited portions in the Office Action.

Further, contrary to the assertion in the Office Action, Applicant submits that the cited portions of Ginter et al. fail to disclose, teach or suggest any software configured to “change the maintained electronic representations of said entities said characteristics and said relationships upon an addition, deletion, or modification of a characteristic or relationship of the entities” as recited in claim 16.

As discussed similarly above with respect to claim 1, none of the cited portions of Ginter et al. discuss changing maintained electronic representations of entities, characteristics and relationships, let alone do so upon an addition, deletion, or modification of a characteristic or relationship of the entities. There is simply no reference in those cited portions of Ginter et al. to entities of an organizational structure, characteristics of entities or the relationships of entities as recited in and in the context of claim 16, let alone changing maintained representations of entities, characteristics and relationships. The cited portions of

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Ginter et al. merely refer to adding, deleting or modifying completely dissimilar and unrelated items to the claimed items, such as load modules, content control information, etc.

Claims 17-51, 66 and 67 depend from claim 16 and are therefore patentable subject matter at least for the reasons set forth above with respect to claim 16, and for the features they individually recite.

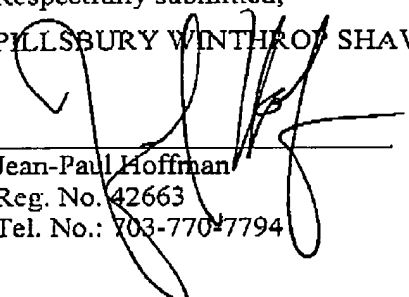
Thus, for at least the above reasons, the cited portions of Ginter et al. and Lampson et al. fail to disclose, suggest or teach all the features of claims 16-51, 66 and 67 and are thus allowable.

All rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance. If questions relating to patentability remain, the examiner is invited to contact the undersigned to discuss them.

Should any fees be due, please charge them to our deposit account no. 03-3975, under our order no. 061047/0265650. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced deposit account.

Respectfully submitted,

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